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Railroad Communication with the Pacific,

WITH AN ACCOUNT OF THE

CENTRAL PACIFIC RAILROAD

OF

CALIFORNIA:

THE CHARACTER OF THE WORK, ITS PROGRESS, RESOURCES,
EARNINGS AND FUTURE PROSPECTS, AND THE
ADVANTAGES OF ITS

FIRST MORTGAGE BONDS.

NEW YORK, AUGUST, 1867.

New York:

GEORGE BROWN, PRINTER, 30 FRANKFORT STREET.

1867.

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RAILROAD COMMUNICATION

WITH THE PACIFIC.

CENTRAL PACIFIC RAILROAD.

THE GREAT NATIONAL PACIFIC RAILROAD LINE, which is being constructed, with the aid and under the supervision of the United States Government, between the Mississippi Valley and the Pacific Ocean, forming with its existing eastern connections a continuous line across the continent, is destined to become one of the most important channels of trade and communication in the world. With its western terminus at San Francisco, the most commodious harbor on the North Pacific Coast, and its branches reaching the railroad systems of the Atlantic States by way of Chicago and Saint Louis, it constitutes, as it were, the Grand Trunk line of this hemisphere. It lies directly in the path of the great westward movement of population and trade, along the temperate belt across this country, and becomes an essential link in the mighty inter-continental traffic between Western Europe and Eastern Asia. It presents the shortest and most practicable route to the Pacific, and must serve four-fifths of all the population west of the Missouri river. It has a dense and productive group of States at one end of the line, and an energetic coast population at the other, with a rich mining country intermediate. Already centres of population dot its length from Omaha to San Francisco,

and it seems certain that a chain of great cities must grow up in its path, swelling the volume of trade and travel to dimensions which baffle all present estimate.

Need of a Railroad to the Pacific.

The necessity for railroad communication with the Pacific has been felt ever since the gold discoveries drew thither large numbers of active people. The yield of bullion has steadily increased, and gives signs of still greater expansion when increased facility of communication will have rendered mining industry more stable and profitable. Thus far only the richest veins could be worked at a profit, by reason of the very costly freights upon all the machinery and subsistence used in extracting the ores. Hereafter many mines will be put within the limit of profitable working; while the Asiatic market for precious metals is inappeasable.

The United States Commissioner of Mining Statistics gives the following estimate of the yield of precious metals from the Pacific States and territories :

1861,	\$43,391,000	1864,	\$63,450,000
1862,	49,370,000	1865,	70,000,000
1863,	52,500,000	1866,	100,000,000

For the past year the product is estimated to be distributed thus :

California,	\$25,000,000	Idaho,	\$17,000,000
Oregon and Washington,	8,000,000	Nevada,	16,000,000
Montana,	18,000,000	Colorado, Utah, &c.....	17,000,000

In eighteen years, the Pacific States have contributed no less than a thousand millions of gold and silver to the store of the world's treasure, and the annual yield is now reckoned at upwards of a hundred millions. This is a constant and immense addition to our material wealth—one of our greatest national resources. Already Oregon and California are sending us also the produce of their fields, vineyards and fisheries, and give indications of supporting an immense population.

Material and Social Benefits.

Beside an unprecedented export of bullion during the same period, there were shipped from San Francisco to New York and Great Britain, from the surplus of last year's harvest, between July 1 and April 27, as follows :

Wheat in sacks, 4,336,387 lbs.

Flour in bbls., 400,000.

The year's crop is estimated at 12,000,000 bushels, and the crop of 1867 promises to be even greater, and large portions of the great interior basin have drawn their supplies from the States of California and Oregon, aside from the above quantity exported.

West of the Missouri boundary lies a vast expanse of country, rich in soil and minerals, as yet hardly explored. With one half of the territory, it has less than a twentieth of the population of the country. California alone, with a population of ten millions, would be no more crowded than New York State is with four millions, and the capacity of the half million square miles beyond the Missouri to support a population of two hundred millions can hardly be doubted. The half million of people in California would speedily jump to five millions upon the establishment of railroad communication ; and the value of all property interests, both there and in the intermediate territories, would be largely enhanced. A railroad is the one thing wanting to shower a general blessing on the Far West.

These gratifying results, together with the prospect of a vast trade between San Francisco, China, Japan, the East India Islands, British Columbia, the Sandwich Islands, the Central and South American ports, the newly acquired Russian America, have added to the original demand for a safe, speedy and short transit to the Pacific. The best route between London and Hong Kong will hereafter lie across the American Continent, thereby avoiding the perils of the Red Sea, or the long journey through the Southern Ocean. There is a manifest disability in the American people sending their passengers, mails, freights (and soldiers even), across a tropical foreign isthmus, or 15,000 miles round the Capes,

when they might have a good and easy road through their own territory. Independently, therefore, of the great material development which must follow the construction of a railroad to the Pacific, the people demanded it because it would be an additional bond of union to its distant parts, make its people more homogeneous, and enable the Government to preserve order and concord throughout its Western domain.

The people on the Pacific coast are drawn from the East, and are still bound by the strongest ties to the Atlantic States. It is not alone the key which is to unlock the mountain stores of treasure, but also to open wide the gates of trade and comfort—the way to home and relatives. It is to bring them within from four to six days of the places they knew in their youth. It is to banish a twenty-two days' ocean voyage, with its Isthmus fevers and its shipboard discomforts, and to mark a period of deliverance to the people of the Pacific coast, who are practically further away from us now than are the people of interior Europe.

The aid of the Government was, therefore, properly invoked to put the scheme within the compass of corporate enterprise.

Legislative Action on the Scheme.

The idea of a railroad to the Pacific has been a favorite theme for speculation for years, and had been urged upon the attention of the government by commercial and political conventions at intervals since 1845.

The first practical step towards building a railroad across the Continent was the introduction of a bill into the United States Senate by Colouel Benton, in February, 1848, providing for the location and construction of a Central National Road from the Mississippi River to the Pacific Ocean—to be an iron railway where practicable—and providing for the application of the larger portion of the proceeds of sales of public lands to defray the expense. The terms of the proposal show that a very inadequate idea of the future greatness of the Far West was then entertained; but even this

project received no active support. At that time there were no railroads west of the Mississippi—none, in fact, had reached it from the East—and the Erie Railroad was not completed. In 1850, under the patronage of the State of Missouri, a company was organized, and a railroad projected from St. Louis along the south bank of the Missouri to the western boundary of the State. In 1860, the outbreak of the war found it halted at Sedalia, about sixty-five miles from the Kansas line.

About the same time, three several roads were projected across Iowa to connect the Mississippi with the Missouri. One of these has since reached Omaha (and another is nearly completed,) which establishes a continuous line of railroad from the Atlantic nearly to the base of the Rocky Mountains, about 1,700 miles.

Upon the discovery of rich gold and silver mines in the celebrated Washoe Region, on the eastern side of the Sierra Nevada Range, in 1859 and 1860, by which population and capital were rapidly drawn from California, certain enterprising merchants on the Pacific Coast, foreseeing that an extensive trade must spring up between San Francisco and the interior, which must eventually be extended across the Continent, combined to ascertain if it were feasible to build a railroad across this formidable barrier of snow-crowned mountains. After two years of exploration, in which several surveys were made, the Donner Lake Pass was selected as the most favorable route to be found within hundreds of miles; and in July, 1861, THE CENTRAL PACIFIC RAILROAD COMPANY OF CALIFORNIA was organized, under the laws of that State, with authority to construct a railroad to its eastern boundary, so as to form part of the projected line to the Atlantic States.

The Pacific Railroad Act of Congress.

Such was the demand for a through line of railroad to the Pacific, and such its importance for commercial, industrial and national purposes, that in July, 1862, Congress, under

the Pacific Railroad Act, authorized the construction of a continuous line of railroad and telegraph from the Missouri River to the Pacific Ocean.

The general purpose of the act was to provide for a continuous line of railroad between San Francisco and the 100th meridian, and from that point five diverging radial lines were to connect with Omaha, Sioux City, Atchison, Leavenworth, and Wyandotte respectively, and through them with the roads built or projected to the Mississippi. The main stem was to be built by either of the companies which should first reach the 100th meridian from the East, together with the Central Pacific, building from the Western end.

A new organization—the UNION PACIFIC RAILROAD COMPANY—was formed to build the Eastern portion; and the CENTRAL PACIFIC RAILROAD COMPANY OF CALIFORNIA was recognized and authorized to receive the Government aid for the Western portion. These two corporations were required to extend their lines from opposite ends until a through connection should be formed.

The law provides that each of these two principal corporations shall have the right to continue onward till met by the other; so that in case of failure or inefficiency of either company, the other should have the privilege of completing the work. The language of the Act is as follows, after authorizing the Union Pacific to build to the California boundary in case it was not sooner met by the Central Pacific Railroad (Section 10, Act of 1862):

“And the Central Pacific Railroad Company of California, after completing the road across said State, is authorized to continue the construction of said railroad and telegraph through the Territories of the United States to the Missouri River, including the branch roads specified in this act, upon the routes hereinbefore and hereinafter indicated, on the terms and conditions provided in this Act in relation to the said Union Pacific Railroad Company, until said road shall meet and connect, and the whole line of said railroad and branches and telegraph is completed.”

And again in the amendment (July 3, 1866), it is further enacted :

"That the Union Pacific Railroad Company, with the consent and approval of the Secretary of the Interior, are hereby authorized to locate, construct, and continue their road from Omaha, in Nebraska Territory, westward, according to the best and most practicable route, and without reference to the initial point on the one hundredth meridian of west longitude, as now provided by law, in a continuous completed line, until they shall meet and connect with the Central Pacific Railroad Company, of California; and the Central Pacific Railroad Company of California, with the consent and approval of the Secretary of the Interior, are hereby authorized to locate, construct, and continue their road eastward, in a continuous completed line, until they shall meet and connect with the Union Pacific Railroad, *Provided*, That each of the above-named companies shall have the right, when the nature of the work to be done, by reason of deep cuts and tunnels, shall for the expeditions construction of the Pacific Railroad require it, to work for an extent of not to exceed three hundred miles in advance of their continuous completed lines."

The United States Government Aid.

In order to facilitate such a gigantic enterprise, Congress, after granting the right of way, *authorized an issue of the bonds of the Government, proportioned to the length and difficulty of the work under construction, amounting in the aggregate to about half the estimated cost of building*; beside alternate sections of public lands lying contiguous to the route. The companies embraced in the Act have an absolute gift of ten alternate sections (12,800 acres) per mile, on each side of the line, of the public lands, and the privilege of using timber, coal, iron, &c., from the territories through which they pass. They are also entitled to receive, upon the completion of continuous sections of twenty miles, the Bonds of the United States Government in the following proportions: between the Missouri River and the east base of the Rocky Mountains, about 650 miles, \$16,000 per mile; across the Rocky Mountains (150 miles), \$48,000 per mile; thence across the Great Basin (900 miles), \$32,000 per mile; across the Sierra Nevada Mountains (150 miles), \$48,000 per mile, and thence to San Francisco (about 120 miles), \$16,000 per mile. The words of the Act are as follows (Section II.):

"That for three hundred miles of said road most mountainous and difficult of construction, to wit : one hundred and fifty miles westwardly from the eastern base of the Rocky Mountains, and one hundred and fifty miles eastwardly from the western base of the Sierra Nevada mountains, said point to be fixed by the President of the United States, the bonds to be issued to aid in the construction thereof shall be *treble* the number per mile hereinbefore provided, and the same shall be issued, and the lands herein granted be set apart, upon the construction of every twenty miles thereof, upon the certificate of the commissioners as aforesaid that twenty consecutive miles of the same are completed ; and between the sections last named of one hundred and fifty miles each, the bonds to be issued to aid in the construction thereof shall be *double* the number per mile first mentioned, and the same shall be issued, and the lands herein granted be set apart, upon the construction of every twenty miles thereof, upon the certificate of the commissioners as aforesaid that twenty consecutive miles of the same are completed."

Upon portions where, by reason of natural obstacles, the road cannot be continuously completed, but where the work is mostly done, provision is made for an issue of two thirds these amounts in advance. It is also provided that the several Companies shall transport the Government mails, messages, troops, supplies, etc., at their regular rates ; half the compensation to be paid in cash, and the balance applied to canceling the Government advances.

Roads Receiving the Government Subsidy.

No little confusion prevails in the public mind concerning the several lines of railway proposed or projected, which are to connect the Pacific with the existing network of communications, all of which, with more or less of distinction, are styled "Pacific Railroads." This confusion is further increased by the fact that various local and State railroad organizations have incorporated into their titles the term "Pacific."

The Companies embraced in the Pacific Railroad Act, and entitled to participate in the grants of Government aid for the construction of the National Trunk Line and branches, are enumerated by the Secretary of the Treasury in a tabular Exhibit of the names of the different roads, the dis-

tances to be built under Government patronage, and the amount of bonds to be issued to each as follows :

NAME OF ROAD.	Distance in Miles.	Amount per Mile.	Total Amount of Bonds to be Issued.
CENTRAL PACIFIC RAILROAD—			
From Sacramento to the western base of the Sierra Nevada Mountains.....	7.18	\$16,000	\$114,880
Thence, 150 miles across the Sierra Nevada Mountains	150	48,000	7,200,000
Thence, to the probable junction with the Union Pacific, or to a point 78 $\frac{295}{1000}$ miles east of Salt Lake City, forming the sole link between the interior and the navig- able waters of the Pacific.....	544 $\frac{115}{1000}$	32,000	17,411,680
Total.....	701 $\frac{95}{1000}$	24,726,560
UNION PACIFIC RAILROAD—			
From Omaha to eastern base of Rocky Mountains, about	516	16,000	8,256,000
Thence, 150 miles across the Rocky Moun- tains.....	150	48,000	7,200,000
Thence, to the probable junction with the Central Pacific, or to a point 78 $\frac{295}{1000}$ miles east of Salt Lake City, estimated	289 $\frac{795}{1000}$	32,000	9,270,560
Total.....	955 $\frac{795}{1000}$	24,726,560
UNION PACIFIC RAILWAY, EAST- ERN DIVISION (KANSAS BRANCH)—			
For a length equal to the distance from the mouth of Kansas River, <i>via</i> the Kansas and Republican Rivers, to 100th meridian—(is allowed to connect east of the Rocky Mountains, about 700 miles), entitled to bonds for.....	381	16,000	6,096,000
ATCHISON & PIKE'S PEAK RAIL- ROAD—now called CENTRAL BRANCH OF UNION PACIFIC—			
100 miles next to the Missouri river.....	100	16,000	1,600,000
SIOUX CITY AND PACIFIC RAIL- ROAD—			
From Sioux City to its junction with the Union Pacific Railroad at Fremont....	100	16,000	1,600,000
WESTERN PACIFIC RAILROAD—			
From San José to Sacramento.....	120	16,000	1,920,000

The charter of the last-named Company contemplated a line from Sacramento toward San Francisco, making the

circuit of the Bay of that name. Their franchise has recently been assigned to parties in the interest of the Central Pacific Railroad Company; and it is probable that this line will be incorporated with the Central Pacific Railroad, and the road extended from Sacramento to San Francisco by the shortest, most direct and practicable route so soon as the overland connection is completed. In the meantime the travel is abundantly accommodated by first-class steamers.

Since the action of Congress, several other railroad organizations, both in California and in the Western States, have adopted, in various forms, the title of Pacific Railroad, which have no claim upon the Congressional appropriations of the national credit.

The National Trunk Line.

THE GREAT NATIONAL PACIFIC RAILROAD, adopted and fostered by the Government, is being constructed mainly by the CENTRAL PACIFIC RAILROAD COMPANY and the UNION PACIFIC RAILROAD COMPANY, *the former having in hand the Western portion, and the latter the Eastern portion of the Main Trunk line*, as prescribed by the Acts of Congress, approved July 1, 1862, and Amendments approved July 2, 1864, and March 3d, 1866. The other Pacific Railroads, so-called, except those named in the foregoing schedule, have no identity with the GREAT NATIONAL ROUTE, *and should not be confounded with it, as this is the only line being constructed under the supervision and patronage of the Government, and receiving the grants of Bonds, as well as land, for the purpose.*

THE UNION PACIFIC RAILROAD, commencing at Omaha, on the Missouri river, has already extended its road across the plains of Nebraska to the vicinity of the Colorado boundary, and it is confidently believed, will reach the eastern base of the Rocky Mountains, 517 miles from the Missouri, by Autumn next. Although the company has shown great energy in carrying its track over a favorable country, its progress over the three successive ranges of mountains which form

the Rocky Mountain chain, must necessarily be more difficult, costly and tedious.

THE UNION PACIFIC, Eastern Division (Kansas branch), which is to unite with the main stem at the foot of the Rocky Mountains, is also pushing rapidly forward, having reached Fort Harker, a point 235 miles west of the Missouri boundary, and five hundred miles west of St. Louis, by a continuous line. It is expected this line will reach Denver, Colorado, in 1868.

The meeting-point of the two powerful companies building the main line has not yet been officially determined, though it is understood by the government officials and by the officers of the respective companies that it will be somewhere east of Salt Lake. The Secretary of the Interior, by whom these roads are finally located and accepted on the part of the United States, in his response to the resolution of inquiry of the House of Representatives, requesting information of the amount of Bonds to be issued to the several companies, dated Feb. 14th, 1867, says :

“ Since the locations of the different roads have not been definitely determined throughout their whole extent, the above estimate must be regarded only as near an approximation as it is possible at the present date to furnish. The point of junction of the Union Pacific and Central Pacific has been assumed to be $78\frac{295}{1000}$ miles east of Salt Lake City, or at a point which will entitle each of these companies to the same amount of bonds.”

He estimates the distance to be built by the Union Pacific Company at 955 miles, and the amount of bonds to be issued therefor, at \$24,726,560. Surveys by the Central Pacific Company, since completed, establish the shortest and most favorable line between Sacramento and the meridian of Salt Lake at 726 miles, which would give as the amount of Bonds to be issued to that company on the completion of that length, \$25,520,000.

Central Pacific Railroad Company—Organization, Franchises, &c.

The Central Pacific Railroad Company of California was organized in July, 1861, under the general railroad law of that State, with authority to build a railroad from the navigable waters of the Pacific at Sacramento to the eastern boundary of the State.

By the 9th Section of the Act of Congress, the Company was required to file its acceptance of its provisions, and assume the obligations therein imposed, within six months after its passage, which acceptance was filed on the third day of December, 1862.

The Company enjoys the fullest authority and sanction of the State of California, in addition to the grants and franchises of Congress, as may be seen from the subjoined extract from "An Act to aid in carrying out the provisions of "The Pacific Railroad and Telegraph Act of Congress," approved April 4th, 1864 (Chap. ccccxvi., Statutes, 1863-4) :

"Section 1st. Whereas, by the provisions of an Act of Congress, entitled an Act to aid in the construction of a railroad and telegraph line from the Missouri river to the Pacific Ocean, and to secure to the Government the use of the same for postal, military, and other purposes, approved July first, eighteen hundred and sixty-two, the Central Pacific Railroad Company of California is authorized to construct a railroad and telegraph line in the State of California, and in the Territories lying east of said State, towards the Missouri River ; therefore, to enable the said Company more fully and completely to comply with and perform the provisions and conditions of said Act of Congress, the said Company, their successors and assigns, are hereby authorized and empowered, and the right, power, and privilege is hereby granted to, conferred upon and vested in them to construct, maintain, and operate the said railroad and telegraph line, not only in the State of California, but also in the said Territories lying east of and between said State and the Missouri River, with such branches and extensions of said railroad and telegraph line, or either of them, as said Company may deem necessary or proper ; and also the right of way for said railroad and telegraph line over any lands belonging to this State, and on, over, and along any streets, roads, highways, rivers, streams, water, and water-courses, but the same to be so constructed as not to obstruct or destroy the passage or navigation of the same ; and also the right to condemn and appropriate to the use of said Company such private property, rights, privileges, and franchises, as may be proper, necessary, or convenient for the purposes of said railroad and telegraph, the compensation there-

for to be ascertained and paid under and by special proceedings, as prescribed in the act providing for the incorporation of railroad companies, approved May twentieth, eighteen hundred and sixty-one, and the Acts supplementary and amendatory thereof; said Company to be subject to all the laws of this State concerning railroad and telegraph lines, except that messages and property of the United States, of this State, and of the said Company, shall have priority of transportation and transmission over said line of railroad and telegraph; hereby confirming to and vesting in said Company all the rights, privileges, franchises, power, and authority conferred upon, granted to, or vested in said Company by said Act of Congress; hereby repealing all laws and parts of laws inconsistent or in conflict with the provision of this Act, or the rights and privileges herein granted.

"Section 2. This Act shall take effect and be in force from and after its passage."

Similar legislative authority is granted by Nevada.

Progress and Character of the Railroad.

This road commences at the City of Sacramento, in the State of California, and extends in an easterly direction across the State to the eastern boundary thereof (about 150 miles), thence across the richest portions of Nevada and Utah, to the vicinity of Salt Lake City, where it will connect with the roads building from the Missouri.

The Company commenced the work of constructing the road in February, 1863, and in May, 1864, had twenty-two miles in operation, and thirty-one in July of that year. The undertaking has been carried over all obstacles with steady persistence, sixty-six miles of the hardest portion being built in three years. In November last ninety-four miles were in actual earning operation, to within eleven miles of the summit of the Sierra Nevadas, overcoming a rise of nearly 6,000 feet; and a large portion of the grading had been done upon the fifty miles next following—all embraced in the mountain crossing, the whole being equal to 500 miles of ordinary railroad.

The portion of road between Colfax and Alta was the most expensive part of the whole line between Sacramento and the eastern boundary of the State. The present terminus at Cisco, ninety-four miles from Sacramento, is a point

where the Company controls the entire business crossing the Sierra Nevadas.

The following table will show the rate of progress and the elevation above the sea level :

	Miles.	Feet.
January, 1, 1865, to New Castle,.....	31 ..	930
May 13, 1865, to Auburn,.....	36
June 10, 1865, to Clipper Gap,.....	42 ..	1,600
September 4, 1865, to Colfax,.....	56 ..	2,443
May 8, 1866, to Secret Town,.....	66 ..	3,415
July 10, 1866, to Alta,.....	73 ..	3,625
November 29, 1866, to Cisco,.....	94 ..	5,911
July, 1867, to Summit,.....	105 ..	7,042
September, 1867, to Virginia Station, estimated,..	150 ..	5,800
July, 1868, to Humboldt, estimated,.....	250 ..	4,500
December, 1869, to Humboldt Wells, estimated,..	507 ..	5,615
July, 1870, to Salt Lake City,.....	726 ..	4,285
December, 1870, to Fort Bridger,.....	800 ..	6,261

The road, so far as completed, has been examined and accepted as entirely satisfactory by the United States Commissioners, and the bonds of the United States have been issued thereon. It will compare favorably with any railroad in the United States. The law requires that the road shall be substantially built of the best American materials, and in such a way as befits its semi-national character. The rails are of the best quality of American iron, weighing at least sixty pounds per yard, and laid with wrought-iron splice plates, except a few miles, where wrought-iron chairs are used. The cross-ties, numbering 2,400 per mile, are 6x8 and 10 inches, and 8 feet long, of red wood and tamarack, which is quite equal to red cedar or locust for durability.

The culverts are all of granite, or other hard rock, except a few of hard-burnt brick in the valley, where stone could not be procured. The bridges are made of the best quality of Puget's Sound timber, with foundations of masonry. The drainage is ample and complete, and the road-bed is well ballasted with gravel or broken stone. The alignment is remarkable for its directness in such a broken, mountainous country.

The grades are necessarily high, to surmount the summit, 7,000 feet above the level of the sea, which elevation is attained without any undulating grades, the rise being constant from the foot-hills on the west side of the Sierras to the summit thereof, thence descending eastwardly to the Truckee River, without loss of elevation or depression.

The highest grade is 116 feet per mile, of which there will be but three and a half miles on the whole line, the average rate being 75 feet to the mile for the Mountain Division. The bulk of the heavy grade is at 105 feet to the mile, with numerous level intervals interspersed. Thirty per cent. only of the distance is occupied by curves, none of which have a radius of less than 573 feet, or 10 degrees. The Baltimore and Ohio Railroad has 17 miles, in two stretches, of 116 feet grade, with curves of 400 feet radius; and the Virginia Central, for many years worked with the unaided locomotive, grades of 296 feet to the mile, and ruling curves whose radii were 300 feet.

A peculiarity of this route is the fact that the engineers have taken advantage of a bold spur or projecting ridge, an offshoot from the main chain of mountains, which extends nearly to Sacramento. By following this ridge all the way up to the sources of the South Yuba, an excellent natural grade is obtained, broken by but few ravines, and with uniform and continuous ascent. Such another path across the mountains is not to be met with for hundreds of miles up and down the range; as in all the passes in use by wagons, the mountain side is too precipitous to be available for railroad purposes.

From the valley of the South Yuba across to the Truckee River, the "deep snow" line of thirty-five miles is met. For the greater portion of this distance, the road follows what is called a "side-hill" line, and for the most part is so sheltered as to be available in winter. Between causeway, embankment and tunnel, the route across the summit will be but little affected by deep snows. At troublesome spots along nine miles of the highest portion a substantial

over-hanging shed will be constructed, so as to shoot the snow clear of the track. The road has been made available for passenger-trains to run at twenty-five miles an hour, and freight-trains at half that speed.

Crossing the Sierra Nevadas.

The chief difficulties apprehended in the construction of the great railroad to the Pacific, high mountain crossings and winter snow obstructions, prove, upon practical test, to be not at all formidable. The mountain ranges have to be crossed at elevations of over 7,000 feet, or more than twice the height of any railroad lines built on this continent. Experience shows that it is entirely practicable, and that the deep snows are not likely to prove a very serious obstacle. In November last the Company had carried its track nearly to the summit, and had demonstrated the feasibility of the whole mountain passage with less average engineering resistance than is met in crossing the Alleghanies, thus disposing of one of the twin fears. During an unusually severe winter it has successfully operated the road as far as built, and could have done so over the mountains with equal ease. It has had large working parties on the Summit Pass, so as to convince its officers that the other fear of impassable snow-drifts is equally needless. Only six days have the trains failed to make the regular trips from snow, which is far less interruption than has attended many of the Atlantic lines.

From Cisco to the Summit, most of the heavy rock cutting is now done. The crest of the ridge is pierced by a tunnel of 1,658 feet, the longest on the road, of which only about 84 feet remained uncut on the 15th July, and at which men are working night and day, excavating at the rate of fifty feet per week. This tunnel is the temporary obstruction to a long step in advance. Only a limited number of men can be employed upon the surface to be excavated, and a shaft has been sunk in the middle from which the work proceeds both ways, so as to present four working faces in all. Nitro

glycerine, manufactured on the spot, has recently been used with advantage in blasting the solid granite. In the meantime a large force is being concentrated upon the line on the eastern slope. About twenty-five miles of this portion is now graded and ready for the iron, and when the tunnel is opened a stretch of thirty-five miles will be laid at once. East of the summit the descent is much easier, the great interior basin being elevated between 4,000 and 5,000 feet above the sea level. In fourteen miles there is a fall of 1,100 feet, after which there is a gentle slope, no where exceeding forty-five feet to the mile, eastward toward Salt Lake. There are, including the Summit Tunnel, fifteen tunnels (in all 6,262 feet) on the portion now grading, two thirds of which have been cut out. Provision is made in the larger tunnels and heavy cuttings for a double track, which, from present indications, will be necessary at no distant day to accommodate the growing traffic. Ten thousand men, mostly Chinese laborers, and 1,300 teams are employed on the work, the heavy parts of which are in a forward state; and it is confidently believed that in January next the locomotive will be traversing the plains of Nevada.

Cost of Construction and Equipment.

The estimated cost of a single continuous line from the Missouri to the Pacific coast, 1,800 miles, was a hundred millions. Half of this sum (\$49,353,160) was by Congress appropriated from the national credit for the purpose, to be divided equally between the two principal companies, the Union Pacific at this end, and the Central Pacific at the other. Ten millions more were devoted to the smaller branches in Kansas.

Referring to the financial burden of so stupendous a work the Company's last Report says :

"The original estimated cost of building the road across the Sierras was but slightly above that of the most expensive railroads in the country where the right of way had to be purchased at considerable cost. Up to the 1st of

January last the Central Pacific Company had expended in building the ninety-four miles in operation, together with about a third of the preparation upon twenty-five miles additional, and for a liberal equipment of rolling stock, nearly \$15,000,000 (\$14,558,714). Fifty-three miles additional, or about one hundred and fifty in all, will, it is confidently expected, be running by October next, which brings the road to the comparatively smooth ground. The total construction cost of this mountain section will be about \$15,000,000, or at the rate of \$100,000 per mile. The rest of the distance to Salt Lake City, five hundred and seventy-five miles, can be constructed for about \$60,000 per mile. The difference in the prices of labor and iron, sufficiently accounts for the increase upon the original estimate. About \$5,000,000 more will have been expended by midsummer for labor, rails, and equipments, most of which is either on the other side or *en route*. The bulk of the engineering difficulties, it will be observed, has already been overcome; and by far the most costly and rugged resistance left behind. Rails are already being laid east of the summit, ready for the advance when the tunnel is opened."

The Company have encountered, at the commencement of their efforts, the most difficult and expensive part of their work, and the success and rapidity with which it has been accomplished, and the financial results already exhibited in the earnings of the completed portion of the road, demonstrate the feasibility of the route, and the profitable character of the enterprise, beyond all question. Rails and materials have been bought and shipped for 160 miles in addition to the mountain section.

Surveys and Estimates for the Extension to Salt Lake.

The general route of the road after leaving the Big Bend of the Truckee River is northeastwardly to the Sink of the Humboldt River, which stream it follows for upwards of 250 miles, through a fertile valley, abounding in wood and water, to Humboldt Wells, 507 miles distant from Sacramento; to this point the route has been officially designated by the Secretary of the Interior. From Humboldt Wells the country has been thoroughly explored to Salt Lake City, in all directions. Two practicable lines were found, one running round the south end of Salt Lake, and the other skirting the north end. The former, however, passes through a rough and desert country destitute of wood and water, and

involves, besides a longer distance, the necessity of crossing the famous Mud Flats of the Great Salt Lake Desert, which would require piling for 25 miles. The more northerly route proved to be very favorable in alignment and grades, and with plenty of wood and water, both for fuel and construction. More than half the distance can be built with grades varying from 0 to 25 feet per mile, while none of them exceed 75 feet per mile, for short distances.

The following Comparative table from the Report of the Chief Engineer will show the grades and distances of the two lines; the terminal points in both cases being Humboldt Wells, and Weber Canyon, a rocky defile through the Wasatch Mountains on the border of Salt Lake, and the natural approach to that city from the eastward. It will be seen that the north line is 84 miles shorter, with a difference of 218 feet rise and fall in its favor.

<i>ROUTE.</i>	<i>Distance in Miles.</i>	<i>Total Rise of Grades.</i>	<i>Total Fall of Grades.</i>	<i>Total Rise and Fall.</i>
North Line, <i>via</i> Pequop Pass.....	219	1,969	3,024	4,993
South Line, <i>via</i> Great Salt Lake Desert.....	303	2,032	3,179	5,211

The line, as surveyed from the Eastern Base of the Sierras to Salt Lake, gives such a favorable location that it is confidently believed the remainder of the line can be built on such easy terms as to keep the Company's interest liabilities down to the ratio of the first 150 miles, or less than two and a half per cent. upon the total cost. The assistance from the national government for this distance is \$32,000 per mile; while a great proportion of the distance can be built for \$50,000 per mile, as the variation from the mean level does not exceed five feet per mile, for continuous stretches of a hundred miles, and in no place exceeds seventy feet per mile for short distances.

This will give the Company a Great Trunk Line across the Continent, following the isothermal belt, nearly 800

miles in length, at a cost for construction and equipment of less than sixty millions of dollars; but worth in earning power a very much greater sum, as the peculiarity of its location forbids anything like advantageous competition.

The Company hopes to increase its force of ten thousand men to fifteen thousand during the present season, when progress over the plains will be very rapid.

In its outlays, it is worthy to be noted, that this Company are fortunate in being able to command large numbers of cheap, serviceable Chinese laborers; and also in the fact that the iron and heavy freights can be shipped round the Horn at less cost than it would take to send them to the Missouri.

Construction Resources.

For the first seven miles the Central Pacific receives the same Government subsidy as the roads east of the Rocky Mountains, \$16,000 per mile; for the next 150 miles of more rugged country it receives \$48,000 per mile, and for the remaining distance (more than 600 miles) \$32,000 per mile. The people of California have shown themselves so profoundly interested in the success of the road that the State and Municipal corporations have added to the resources of the Company. The State of California has assumed the payment of the interest for twenty years upon one million and a half of the Company's bonds; a concession worth about \$3,000,000 in gold. In addition to the subsidy granted this Company by the General Government, the City of San Francisco has donated, to aid in the construction of the road, four hundred thousand dollars, in city seven per cent. thirty year gold paying bonds; and the City of Sacramento has donated some thirty acres of land in that city, embracing about 1,300 feet of valuable water front on the Sacramento River, which, with the privileges connected therewith, is considered worth three hundred thousand dollars; and the Company have also received from stock subscriptions about \$4,000,000, mostly in gold.

The following is a Schedule of the Company's Resources, upon the Mountain Division (about 150 miles), showing the proportion bearing no interest, and that for which the Company is liable :

CONSTRUCTION RESOURCES.	Value.	Interest Liabilities of Company.
Subscriptions to Capital Stock,.....	\$4,000,000	
Net earnings, after interest payments, 1865 (gold),	178,161	
“ “ “ 1866 “	530,503	
“ “ “ 1867 “		
estimated on basis of previous year.....	1,050,840	
Donation City San Francisco, 30 years' bonds...	400,000	
“ “ Sacramento, 30 acres, including		
valuable water front, for depots, wharves,		
shops, &c.....	300,000	
U. S. public lands along the line 2,000,000 acres,		
mostly in valuable timber, minimum valuation	3,000,000	
U. S. Government Bonds 6 per cent. ; interest paid		
by U. S.....	7,336,000	
State Aid Bonds ; interest paid by California....	1,500,000	
Central Pacific Convertible Bonds, 7 per cent.		
(gold), 1864.....	1,500,000	\$105,000
Central Pacific First Mortgage Coupon Bonds,		
six per cent. interest (gold), payable in		
New York.....	7,336,000	440,160
Total resources for 156 miles.....	\$27,131,504	Total \$545,160

It will be seen that only two of these items bear interest for the payment of which the Company is annually chargeable. The whole interest liability upon this schedule will be but \$545,160 in gold, when the whole amount of First Mortgage Bonds to be issued upon this section of the road are sold ; while its net earnings, by a moderate estimate, will be three or four times that sum.

The above statement does not include the proceeds of further subscriptions to the capital stock, which they are entitled to issue to the extent of a total amount of \$20,000,000.

The total amount of public lands appropriated for the construction of this line is 10,000,000 acres, or at the rate of twenty alternate sections per mile (12,800 acres), the minimum value of which is estimated at \$1.50 per acre, while much of it must be of far greater value on the western portion, from its forests and timber.

The Company is now selling quantities of its alternate sections of land at the minimum rate of \$2 50 in gold per acre ; except to pre-emptors who may deem it advisable to purchase from the Company in order to obtain a clear title at once, where the price is \$1 25 per acre. There is evidence that an active settlement will follow the progress of the road, all of which will augment the value of the unsold lands and add to its business and resources.

Remunerative Business from Local Sources.

It was an important question for the friends and projectors of this enterprise to know whether the business would be sufficient to make it a paying investment ; and this question has already been answered to their satisfaction. It is difficult for persons residing at the East to form an adequate notion of the extent of the existing and prospective traffic between the ports and cities of California and the thriving people of the Great Interior Basin. San Francisco is the great natural centre of business and intelligence for the North Pacific Slope. The manufactures and wares consumed in Oregon, Washington, Columbia, Idaho, Utah and Nevada, are all drawn thence, and the three last mentioned States draw their subsistence and supplies thence also. Such were the imperative demands of the local transportation between California and the mining regions east of the Sierras, that a steam road even at this cost was an economy. It has been estimated that the wagon freights across the mountains in a single year, before the commencement of the railroad, amounted fully to \$13,000,000 ; which would of itself, without any increase, warrant the construction of the most expensive railroad. The actual experience of the road justifies the conclusion that the local traffic alone would be sufficient to make it one of the most profitable lines of railroad in the world ; independently of the through connection across the Continent, of which it must receive the exclusive benefit west of Salt Lake. The earnings for the three autumn

months of 1866, when freight could be forwarded from its terminus on the side of the mountain—were sufficient to pay a dividend of 12 per cent. per annum upon the cost of that portion. Of course a railroad that is able to pay the interest upon its cost, even while in its infancy, would be regarded as exceedingly profitable, even if the whole burden were borne by the road itself. When, however, we consider its constantly increasing business, and that the cost of construction is so widely distributed, its financial success is most assuring.

The following table will show the actual net earnings of the road as it progressed up the mountain side, after the payment of operating expenses, for the past two years, with an estimate for the present year, based upon the same rate of increase; and the relation of the earnings to the interest charges assumed by the road, upon the supposition that the whole amount of bonds authorized will have been issued:

<i>Date.</i>	<i>Average Miles Running.</i>	<i>Net Earnings (gold).</i>	<i>Int. payable on Bonded Debt.</i>	<i>Average net Earnings per Mile.</i>	<i>Average Debt Charges per Mile.</i>
1865....	40	\$280,272	\$102,111	\$7,000	\$2,550
1866....	75	655,883	125,380	8,750	1,672
1867....	150	1,600,000	545,160	10,937	3,633

Thus it will be seen that the road would be abundantly able to pay the interest upon the entire cost of construction and equipment; but as the general Government and California corporations have assumed the larger portion of the interest charge, the Company is able to carry over a handsome surplus to the construction fund. As the heaviest expenditure is now made, and every extension of the road adds to the value of the whole, by decreasing the ratio of operating expenses at the same time that it multiplies its own natural business, the point of financial difficulty has been passed. Once across the mountains a whole scheme of industrial enterprises in Nevada and Idaho stand ready to be quickened into activity, which have hitherto been beyond the limit of profitable working. With the topographical,

climatic and financial difficulties subdued, the Central Pacific Railroad of California becomes a settled and imminent success.

Increase of through Traffic.

Estimates have been made of the probable amount of the through traffic which will pass over the main trunk line from the Pacific to the Missouri. The existing through trade between New York and San Francisco affords some basis for the calculation, and is given as follows ;

Ships going from the Atlantic round Cape Horn—100....	80,000 Tons.
Steamships connecting at Panama with California and China	
—55.....	120,000 “
Overland Trains, Stages, Horses, &c.....	30,000 “
Total.....	230,000 Tons.

Thus, we have two hundred and thirty thousand tons carried westward ; and experience has shown that in the last few years, the returned passengers from California have been nearly as numerous as those going. There can be no doubt that the completion of the Pacific Railroad will not only open the way to many persons now wishing to visit that coast, but also afford the opportunity to thousands at the Far West to revisit their Eastern homes. The following figures indicate the passenger business as now carried by ocean and overland conveyance :

110 (both ways) steamships.....	50,000
200 “ “ vessels.....	4,000
Overland (both ways).....	100,000
Number per annum.....	154,000

At present prices (averaging half the cost of the steamships), for both passengers and tonnage, we have this result :

154,000 passengers at \$100.....	\$15,400,000
460,000 tons rated at \$1 per cubic foot...	15,640,000
Present cost of transportation.....	\$31,040,000

That a remarkable stimulus will be given to travel, emigration, mining, trade, and foreign commerce is unquestionable ; and it is not unreasonable to suppose that, at half the above rates, the revenues will be three times the above sum, half of which will be the natural business of the Central Pacific.

Exhibit of Earnings and Expenses.

The following table of earnings and expenses for the two years from January 1st, 1865, to December 31st, 1866, inclusive, will show the growth of the business of the Road as its line has been extended from point to point, and demonstrate the financial success of the enterprise :

Months.	1865.			1866.		
	Gross Earnings.	Operating Expenses.	Net Earnings.	Gross Earnings.	Operating Expenses.	Net Earnings.
January.....	\$11,040 89	\$83,447 77	\$219,956 38	\$25,759 14	\$10,793 19	\$14,965 95
February.....	10,479 55			29,772 13	9,916 47	19,855 66
March.....	15,330 26			44,409 92	12,033 85	31,476 07
April.....	20,076 26			52,993 17	13,013 17	39,980 00
May.....	22,939 36			65,115 83	15,507 64	49,608 19
June.....	32,429 07	13,994 15	34,089 25	67,429 78	16,001 23	51,428 55
July.....	35,633 33			84,756 39	18,867 76	65,888 63
August.....	39,247 42			111,770 35	25,148 39	86,622 03
September....	60,302 62			114,400 00	25,168 56	89,231 44
October.....	65,925 34			127,065 96	18,554 55	108,511 41
November....	48,083 40	14,227 61	26,226 84	86,286 96	20,234 53	66,050 41
December.....	40,454 45			55,257 33	22,992 58	32,264 75
Total.....	\$401,942 00	\$121,669 53	\$280,272 47	\$665,016 96	\$209,133 87	\$665,883 09

This exhibit is very satisfactory, showing the gross receipts for 1866 to have reached \$865,016 in gold, of which two thirds was net profit.

It will be observed that the ratio of operating expenses to the gross earnings is less than 30 per cent., while in the Atlantic States it ranges from 65 to 85 per cent. This is partially explained by the fact that the rates for transportation are *five times those of the Atlantic States, being ten cents per mile for passengers, and fifteen cents per ton per mile for freight, in gold.* The operating expenses are but little greater, and constantly decrease in ratio as the road progresses. The management of the road has been exceedingly

frugal, notwithstanding some exceptional outlays attending a new line under untried conditions.

High as these rates may seem to persons familiar only with the low tariffs of Eastern roads, they are deemed entirely satisfactory, and are readily paid, being less than one-third the rates heretofore paid for transportation by teams over the same region.

The following Table of Earnings and Operating Expenses of several leading railroads, for the past fiscal years, from the *Stockholder*, illustrates the remarkable advantages enjoyed by the Central Pacific in this respect :

NAME OF ROAD.	Date.	Miles oper- ated.	Gross Earnings.	Expenses, including Taxes.	Per Cent- age of Ex- penses to Earnings.
Atlantic & Great Western Railway	1866	507	\$4,833,489 86	\$3,522,460 23	72.80
New York Central	1865	657	13,976,524 39	11,220,809 94	80.29
Do. Do.	1866	692	14,596,785 68	11,335,673 24	77.66
Philadelphia and Reading	1866	556	10,902,819 00	6,838,747 00	61.80
Cleveland, Columbus & Cincinnati	1865	138	2,386,132 50	1,550,622 29	64.90
Bellefontaine	1865	202	1,675,164 96	1,274,225 45	76.07
Pittsburg, Fort Wayne & Chicago	1866	483	7,467,217 56	5,147,686 54	68.90
Erie	1865	797	15,434,774 72	11,154,930 46	72.27
Cleveland & Pittsburg	1866	225	2,351,905 83	1,697,179 47	72.00
Pennsylvania	1865	550	17,459,169 49	13,270,058 54	76.00
Do.	1866	559	16,583,882 49	12,790,609 54	77.13
Michigan Central	1866	328	4,416,490 51	2,808,375 92	63.20
Chicago & North Western	1865	930	6,820,749 75	4,621,361 84	67.75
Ohio & Mississippi	1865	340	3,793,605 45	2,772,897 46	73.10
Central Pacific	1865	*40	401,942 00	121,689 53	30.28
Do. Do.	1866	*75	865,016 96	209,133 87	24.18

* Average for year.

The statements of the present revenue of the Company from the traffic on the completed portion of their road are very important, as showing that the local trade of California and Nevada alone is sufficient to make the enterprise immensely profitable, independent of the through traffic which may be looked for when the completed lines shall span the Continent. The Central Pacific Railroad must continue to command this trade without competition, as no company can undertake to construct so costly a line without the Government aid, which is not likely to be granted for the construction of a parallel line.

Estimated Business of the Current Year.

Complete returns of the earnings and expenses for the first six months of the current year have not yet been received. The Winter months being unusually severe, and the Spring unseasonable, the freight could not be forwarded by teams from the temporary terminus of the road during the greater portion of the time. It is gratifying to know, however, that there is no month in which the earnings did not largely exceed the operating expenses; and for the month of June, the first in which communication was entirely opened with Nevada, the gross earnings were upwards of \$122,000, and for July, \$175,000, in gold, or more than four times the amount of the operating expenses. This was upon 94 miles of road in operation. By the time the State line is reached, it is expected the earnings will be at the rate of over two millions of dollars per annum, which will be increased as the road advances. The following is an estimate of the business of the road based upon the two preceding years. It is confidently believed that when the line is completed to the Nevada plains, *the road can be operated for 20 per cent. of the gross earnings*, with the same schedule of rates. But, in fact, there is good reason to believe that the traffic will be doubled or quadrupled when the entire mountain region is traversed by the locomotive; so that without estimating the through travel (all of which must then fall to its share), the legitimate business of the road is enormous.

Year.	Average Miles Running.	Net Earnings (gold).	Annual Interest Liabilities.	Surplus Applicable to Construction F.
1865	40	\$280,272 47	\$102,111 14	\$178,161 33
1866	75	655,883 09	125,380 00	530,503 09
1867	150	1,600,000 00	545,160 00	1,054,840 00
Total...		\$2,536,155 56	\$772,651 14	\$1,763,504 42

It will be observed that while its earnings are heavy, the interest engagements of the Company upon the portion of the road completed are very light, about two and a half per cent. only of the total cost of construction and equipment.

It should also be noted that when the California State line is reached, the road is in the vicinity of the famous Washoe region, containing the most valuable mines in the world—having yielded over twelve millions of gold and silver, for each of several years past. It is the seat of an active population, and will receive its supplies, as well as large quantities of timber, over this railroad. The Government Commissioner of Mining Statistics reports that its forty-six companies consume, for mining and smelting purposes, timber and lumber valued at one million dollars per year. When the North Bend of the Humboldt is reached, the rich Idaho mining regions are brought within 36 hours of San Francisco.

Central Pacific Railroad Company's First Mortgage Bonds.

According to the original Pacific Railroad Act the advances of the Government to the several companies upon the completed sections of their lines, were made a first lien upon the respective roads, equipment, &c. Under this provision none of the companies, except the Central Pacific were able to carry forward the work of construction as contemplated. It became evident, however, that the best interests of the country and of the government required the earliest practicable completion of the great enterprise. The General Government was already secured in the priority of accommodation in the use of the road for the transportation of mails, troops, supplies, &c.; and it was certain that the road would be largely devoted to the public service. Congress, in July, 1864, amended the general law so as to waive the prior lien of the Government upon the roads, in favor of such claims as private capitalists and investors might assume.

The companies building the National Pacific Railroad were authorized "to issue their First Mortgage Bonds on their respective railroads and telegraph lines, to an amount not exceeding the amount of the Bonds of the United States" granted for the same purpose; and it was

provided that "*the lien of the United States Bonds shall be subordinate to that of the Bonds of the said Companies.*" The Government, by this amendment, surrendered its own prior lien, and substituted in its place that of the First Mortgage Bondholders; being satisfied to look for the re-payment of its own advances mainly to the services of the road, and a small percentage of the future traffic extending over a long series of years, on the conditions prescribed by the original Act.

In accordance with the provisions of this amendment and the Statutes of California, the Central Pacific Railroad Company are now issuing their FIRST MORTGAGE BONDS, having THIRTY YEARS TO RUN, and BEARING INTEREST AT THE RATE OF SIX PER CENT., INTEREST AND PRINCIPAL PAYABLE IN COIN, in the City of New York, upon their railroad, the principal portion of the Main Stem Line, and *the most valuable link in the great National Pacific Railroad.* They are issued only in amount equal to the Government Bonds issued to aid the construction of the same section, viz: \$16,000 per mile upon the first seven miles, and \$48,000 per mile upon the remaining distance to the State line; or *less than one half the actual cost of construction, and one third the cost and value of the road and equipments, pledged for their redemption.* They are in Bonds of \$1,000 each, with semi-annual gold coupons attached, and are OFFERED, FOR THE PRESENT, AT 95 PER CENT. OF THEIR PAR VALUE, IN CURRENCY, with accrued interest from July 1st, also in currency.

Advantages of the Bonds.

These First Mortgage Bonds of the Central Pacific Railroad Company therefore possess characteristics and advantages peculiar to them as a class, and which render them far superior to the Bonds of other railroad or private corporations. They are commended to the attention of investors by the following important facts:

First. The First Mortgage Bondholders are joint investors with the National Government, to the same amount only, which places the enterprise beyond the contingencies and risks attending railroads in general.

Second. They are issued only upon completed sections of the road, examined and approved by Government commissioners as a first-class railroad, and consequently always represent a first claim upon a finished, continuous productive property.

Third. The lien of the Government being specially made subordinate to that of the First Mortgage Bonds, there can hardly arise a contingency in which the Company or the Government can fail to secure the First Mortgage Bondholders.

Fourth. As the National Pacific Railroad route is destined to become the great Trunk Line of the Continent, its business must continue to increase, giving assurance of the uninterrupted payment of the interest, and the fullest security for the principal of the First Mortgage Bonds.

Fifth. Published statistics show that the First Mortgage Bonds of leading railroads have, for six years past, been less liable to fluctuations, and have maintained a *higher average selling price at the New York Stock Exchange than even the securities of the Government*, bearing the same rate and kind of interest.

Special Assurances of the Central Pacific Railroad Bonds.

The Central Pacific Railroad Company enjoys all the privileges, grants and subsidies conferred by the Acts of Congress upon the several Companies authorized to construct the National Railroad to the Pacific, and its Eastern forks; and has beside the following *noticeable, exclusive, and im-*

portant local advantages, peculiar to the Western end of the route,—considerations which give special security and value to its First Mortgage Bonds :

- I. The Central Pacific Railroad forms the sole Western link of the only railroad route to the Pacific selected and adopted by Congress to receive the Bonds of the Government, as well as the Public Lands, in aid of its construction. *It is exempt from parallel competition*, as it commands the natural accessible gateway between San Francisco and the East. *It must receive undivided the through traffic* which is distributed among the various branch roads building and projected east of the Rocky Mountains.
- II. The most difficult and costly portion of its road is now built, and *the only formidable mountain range in its course is practically overcome*. The line is being regularly and easily worked to the summit of the Sierra Nevada (94 miles), and in a few weeks the track will be laid to the Truckee River, whence the remainder of the construction will be easy, inexpensive and rapid towards Salt Lake.
- III. The Company has received from the State and principal cities of California, *assistance in money, credit, and valuable property, worth over \$3,000,000 in gold*: and it will have received, upon the completion of the 726 miles between Sacramento and Salt Lake City, more than \$25,000,000 in the Bonds of the United States; or at the rate of over \$35,000 per mile.
- IV. The road enjoys already an immense, exclusive, local trade between Sacramento and the richest portions of Eastern California, Nevada, Idaho, and Utah; sufficient to make it *one of the most profitable railroads in the world, independently of the through traffic*, which cannot be diverted or withheld from it.
- V. The road lies wholly in territory yielding the precious metals, its revenues are collected in coin, *and its business*

is conducted on a specie basis. Its rates for transportation are very advantageous, being more than three times those of roads lying east of it; and the *ratio of operating expenses is less than 25 per cent. of the gross earnings.*

VI. In consequence of the aid it receives from the General Government, from the State of California, and from municipal corporations, the annual interest obligations which the Company are called upon to assume are very light. The net earnings upon an average of about 75 miles, in 1866, were nearly *three times the amount of annual interest liabilities to be assumed in building it, and were \$235,000 more than the annual interest on the entire amount of First Mortgage Bonds which the Company can issue upon the first 150 miles.*

VII. By the terms of an Act of Congress, the Pacific Railroad Companies are authorized to make the interest upon their First Mortgage Bonds payable in gold if they so elect. The Central Pacific Company have bound themselves to pay the principal and interest of their Bonds in GOLD COIN OF THE UNITED STATES; and this agreement is made under the provisions of a Mortgage executed and recorded by them in the State of California, wherein specie payments have not been suspended, and where the legislature has passed a special enactment *recognizing, authorizing, and enforcing contracts in which the payment is expressed in gold.* The Company's agreement to pay the PRINCIPAL AND INTEREST of these Bonds in coin is therefore *legally binding*, unlike similar agreements made by companies in States where no such legislative sanction exists.

In these important particulars the securities of the Central Pacific Company possess advantages over those of other companies,—advantages not possessed by other railroad

bonds; and they *offer a greater degree of safety, stability and profit combined, than any others now offered to investors.*

The First Mortgage Bonds of this Company are destined to occupy a prominent place among First Class Securities in the money markets of this country and Europe, and will, without doubt, be eagerly sought for, and anxiously dealt in hereafter, at rates materially in advance of the price at which they are now offered by the Company.

Having been for some time familiar with the operations of the Central Pacific Railroad Company, we are satisfied that they are conducted with rare ability and prudence, and that the energetic and economical management of the Company's affairs entitle them to the confidence of Capitalists and of the public. We have carefully investigated the progress, resources, and prospects of the Road, and have the fullest confidence in its success, and in the value and stability of the Company's securities. The attention of Trustees of Estates, Institutions, and individuals desiring a long, safe and remunerative investment, is especially invited to these First Mortgage Bonds.

Orders may be forwarded to us direct, or through the principal Banks and Bankers in all parts of the country.

Remittances may be made on drafts on New York or Legal Tender Notes, National Bank Notes, or other funds current in this city, and the Bonds will be forwarded to any address by Express, free of charge. Inquiries for further particulars, by mail or otherwise, will receive punctual attention.

All kinds of Government Securities received at the full market price in exchange for the above Bonds.

BOWEN & FOX,

STOCK BROKERS, AND SPECIAL AGENTS OF THE
C. P. R. R. Co., FOR PHILADELPHIA,

No. 13 Merchants' Exchange.

AUG. 1, 1867.

